

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Original) An analog front end system, comprising:
 - a digital-to-analog converter;
 - a line driver, electrically coupled to said digital-to-analog converter;
 - a hybrid, electrically coupled to said line driver;
 - a multiple-input device having a plurality of inputs and at least one output, wherein at least one of said inputs is electrically coupled to said hybrid;
 - an analog-to-digital converter, electrically coupled to said output of said multiple-input device;
 - an isolation circuit configured to maintain direct-current isolation between the terminals of said isolation circuit, wherein:
 - said isolation circuit is electrically coupled to at least one of said inputs of said multiple-input device; and
 - said isolation circuit comprises a plurality of resistance elements and a plurality of capacitance elements, electrically coupled;
 - a ground circuit configured to provide a ground reference, wherein:
 - said ground circuit is electrically coupled to at least one of said inputs of said multiple-input device; and
 - said ground circuit comprises a plurality of resistance elements and at least one ground reference point, electrically coupled; and

a processing circuitry, said processing circuitry being configured to control said digital-to-analog converter, said line driver, said analog-to-digital converter, and said multiple-input device in response to commands received by said processing circuitry.

2. (Original) The analog front end system of claim 1, wherein said multiple-input device is configured such that said inputs are selectively operational.

3. (Original) The analog front end system of claim 1, wherein said multiple-input device is a multiplexer.

4. (Currently Amended) An analog front end system, comprising:
a digital-to-analog converter;
a line driver, electrically coupled to said digital-to-analog converter;
means for multiplexing a plurality of inputs to at least one output, electrically coupled to said line driver; [[and]]
an analog-to-digital converter, electrically coupled to said means for multiplexing;
and
means for direct current isolation of said multiple-input device from an input terminal, electrically coupled to one of said inputs of said means for multiplexing.

5. (Original) The analog front end system of claim 4, further comprising a hybrid, electrically coupled between said line driver and one of said inputs of said means for multiplexing.

6. (Canceled).

7. (Original) The analog front end system of claim 4, further comprising means for providing a ground reference, electrically coupled to one of said inputs of said means for multiplexing.

8. (Original) The analog front end system of claim 4, further comprising means for controlling said digital-to-analog converter, said line driver, said analog-to-digital converter, and said multiple-input device responsive to commands received by said means for controlling.

9. (Currently Amended) An analog front end system, comprising:
a digital-to-analog converter;
a line driver, electrically coupled to said digital-to-analog converter;
a multiple-input device having a plurality of inputs and at least one output, electrically coupled to said line driver;
a isolation circuit electrically coupled to said multiple input device, wherein said isolation circuit comprises a plurality of resistance elements and a plurality of capacitance elements, electrically coupled; and
an analog-to-digital converter, electrically coupled to said multiple-input device.

10. (Original) The analog front end system of claim 9, further comprising a hybrid, electrically coupled between said line driver and said multiple-input device.

11 –12 (Canceled).

13. (Original) The analog front end system of claim 9, further comprising a ground circuit configured to provide a ground reference, electrically coupled to said multiple-input device.

14. (Original) The analog front end system of claim 13, wherein said ground circuit comprises a plurality of resistance elements and at least one ground reference point, electrically coupled.

15. (Original) The analog front end of claim 9, wherein said multiple-input device is configured such that said inputs are selectively operational.

16. (Original) The analog front end system of claim 9, further comprising a processing circuitry, said processing circuitry being configured to control said digital-to-analog converter, said line driver, said analog-to-digital converter, and said multiple-input device in response to commands received by said processing circuitry.

17 – 34 (Canceled)